FIG.1

TABLE 1

GOAL	GOAL PARAMETERS
DURING "T", SATISFY "Q" FOR CLIENT "C" USING SERVICE "S"	C: Client ϵ {client1, client2, ...} S: Service ϵ {Web, DNS, Fileserver, ERP, ...} Q: QoS Expression Q.metric: QoS Metric ϵ {TransactionResponseTime, TransactionFailRate, ...} Q.op: Operator ϵ {=, ≤, ≥, ...} Q.value: Desired QoS Value ϵ {Float, Integer, Enumeration, ...} T: TimeRange

FIG.2

TABLE 2

PROCEDURAL POLICY LOGIC

```
1.  if ( ¬ satisfied ( getClientQoS( C, Q.metric), Q.op, Q.value ) )
2.  then
3.        set priority[C][S] = priority[C][S]++       // Make appropriate priority adjustment, i.e. increase.
4.        enforce the following "if condition then action" rule at each network element E that switches packets sent to/from C:
5.              if ( packet P has arrived at E ) && ( timeOfDay is in T ) &&
6.                    (     ( ( P.destIPport == S.serviceIPport ) && ( P.srcIPsubnet == C.subnetMask ) ) ||
7.                          ( ( P.srcIPport == S.serviceIPport ) && ( P.destIPsubnet == C.subnetMask ) ) )
8.              then
9.                    set P.priority = priority[C][S]
10.             endif
11. Endif.
```

FIG.3

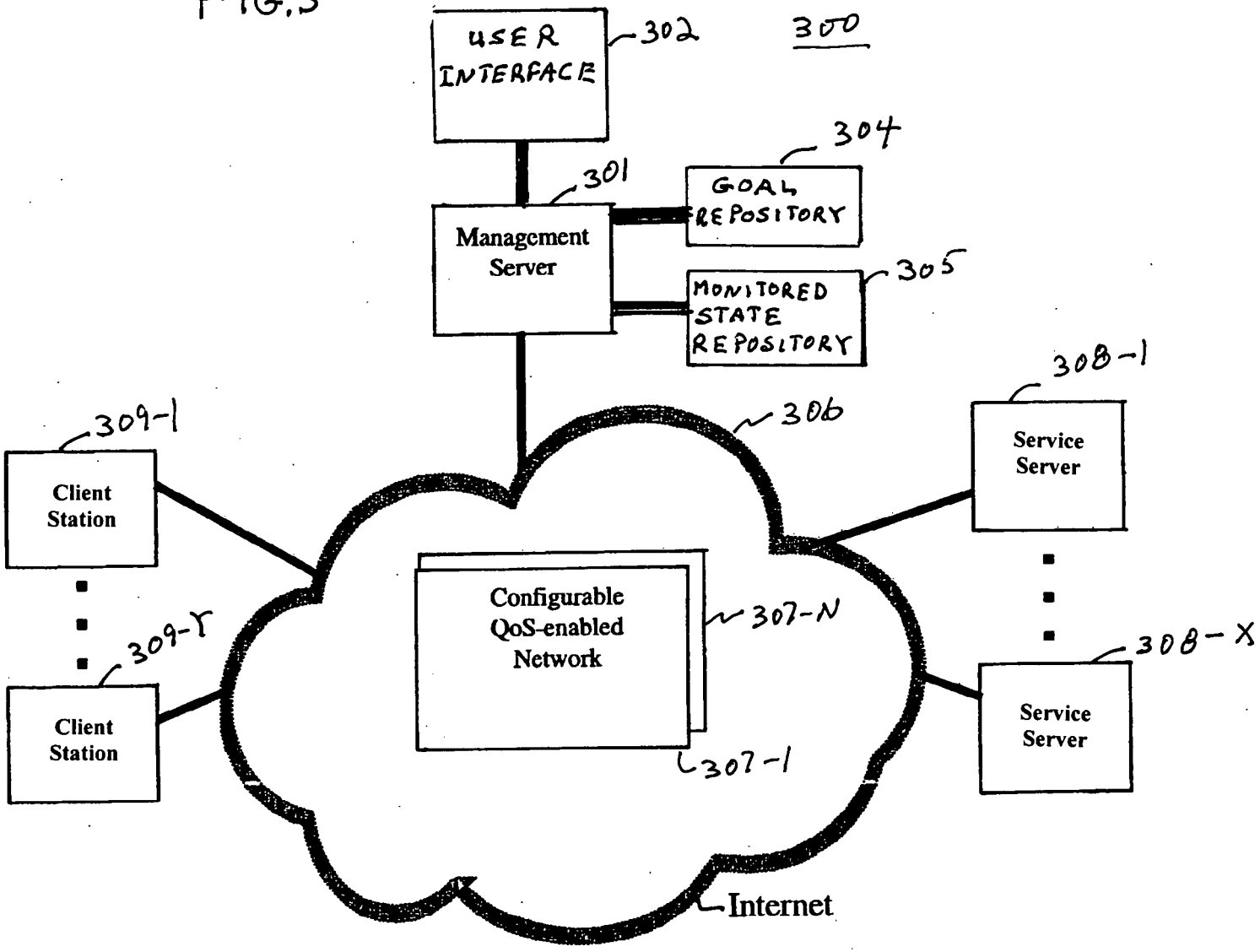

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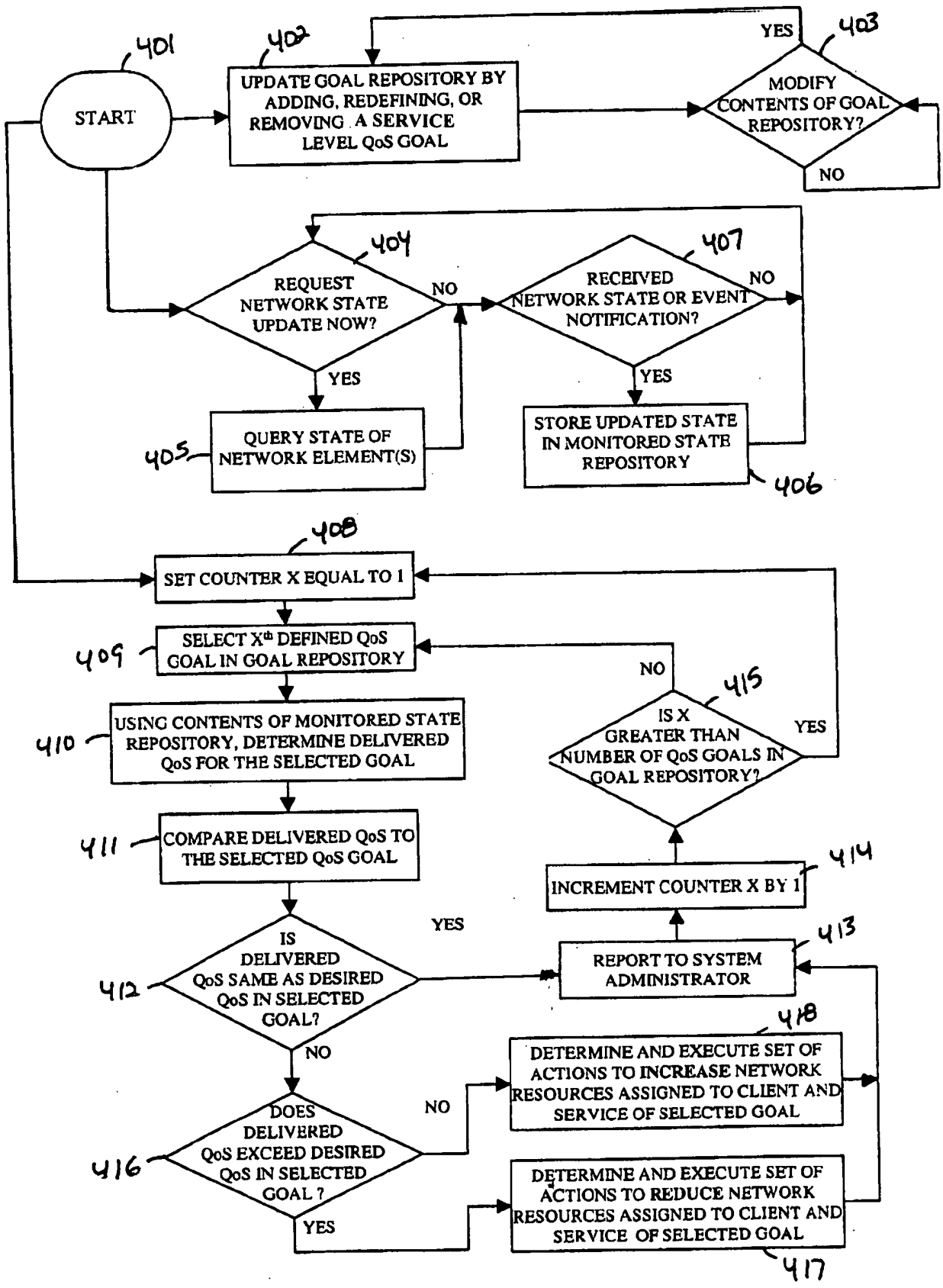
FIG. 4


401
START
402
UPDATE GOAL REPOSITORY BY ADDING, REDEFINING, OR REMOVING A SERVICE LEVEL QoS GOAL
403
MODIFY CONTENTS OF GOAL REPOSITORY?
YES
NO
404
REQUEST NETWORK STATE UPDATE NOW?
NO
YES
405
QUERY STATE OF NETWORK ELEMENT(S)
407
RECEIVED NETWORK STATE OR EVENT NOTIFICATION?
NO
YES
406
STORE UPDATED STATE IN MONITORED STATE REPOSITORY
408
SET COUNTER X EQUAL TO 1
409
SELECT X^th DEFINED QoS GOAL IN GOAL REPOSITORY
410
USING CONTENTS OF MONITORED STATE REPOSITORY, DETERMINE DELIVERED QoS FOR THE SELECTED GOAL
411
COMPARE DELIVERED QoS TO THE SELECTED QoS GOAL
412
IS DELIVERED QoS SAME AS DESIRED QoS IN SELECTED GOAL?
YES
NO
413
REPORT TO SYSTEM ADMINISTRATOR
414
INCREMENT COUNTER X BY 1
415
IS X GREATER THAN NUMBER OF QoS GOALS IN GOAL REPOSITORY?
NO
YES
416
DOES DELIVERED QoS EXCEED DESIRED QoS IN SELECTED GOAL ?
NO
YES
418
DETERMINE AND EXECUTE SET OF ACTIONS TO INCREASE NETWORK RESOURCES ASSIGNED TO CLIENT AND SERVICE OF SELECTED GOAL
417
DETERMINE AND EXECUTE SET OF ACTIONS TO REDUCE NETWORK RESOURCES ASSIGNED TO CLIENT AND SERVICE OF SELECTED GOAL